

201
12.6 HW

Key p 842-844 3, 4, 7, 10, 11, 17, 23, 33

3. $A = 4\pi 4^2$

$64\pi \text{ ft}^2$

201.06 ft^2

4. $A = 4\pi (7.5)^2$

$225\pi \text{ cm}^2$

706.86 cm^2

7. $C = 9.6\pi$

$r = 4.8 \text{ in}$

11. $C = 48.4\pi$

$r = 24.2$

$A = 4\pi 24.2^2$

$2342.56\pi \text{ cm}^2$

7359.37 cm^2

10. They forgot to add
the great circle's area,
and forgot to take

$\frac{1}{2}$ of sphere's area.

$A_{\text{Hemi}} = \frac{1}{2} 4\pi r^2 + \pi r^2$

$2\pi 25 + 25\pi$

$75\pi \text{ ft}^2$

235.6 ft^2

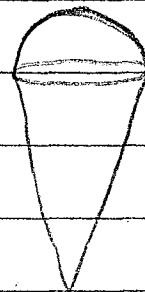
17. $V = 91.95 \text{ cm}^3$

$91.95 = \frac{4}{3}\pi r^3$

$21.95 = r^3$

$2.80 = r$
 cm

23.



$r = 4.9 \text{ cm}$

$h = 12.6 \text{ cm}$

$4.9^2 + 12.6^2$
 $l = 13.52$

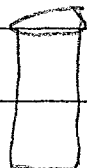
$SA = LA_{\text{con}} + \frac{1}{2} A_{\text{sphere}}$

$V = \frac{1}{2} V_{\text{sphere}} + V_{\text{con}}$

$SA = \frac{1}{2} 9.8\pi 13.52 + \frac{1}{2} 4\pi 4.9^2$

$208.11 + 150.86$

$SA = 358.97 \text{ cm}^2$



$h = 8.625$

$r = 1.43$

a. $C = 8 = 2\pi r$

$1.27 = r$

$V = \frac{4}{3}\pi 1.27^3$

8.65 in^3

b. $V_{\text{cylinder}} = 1.43^2 \pi \cdot 8.625$

$V = 55.41 \text{ in}^3$

Space
 $55.41 - 3(8.65) = 29.46 \text{ in}^3$

$V = \frac{2}{3}\pi 4.9^3 + \frac{1}{3}\pi 4.9^2 \cdot 12.6$

$246.40 + 316.80$

563.20 cm^3